RELEASE IN PART
EXEMPTIONS: (b)(1)
(b)(3)
DATE: AUG 2001

~~Top Secret~~
~~Controlled Dissem~~
~~Limited Distribution~~

CIA HISTORICAL REVIEW PROGRAM
RELEASE AS SANITIZED

NATIONAL INTELLIGENCE ESTIMATE

Soviet Forces for Intercontinental Attack

[ ]

~~Top Secret~~
NIE 11-8-73
~~IGS 689086-73~~
25 January 1974

Copy № 206

~~TOP SECRET~~

THIS ESTIMATE IS SUBMITTED BY THE DIRECTOR OF CENTRAL INTELLIGENCE AND CONCURRED IN BY THE UNITED STATES INTELLIGENCE BOARD.

The following intelligence organizations participated in the preparation of the estimate:

The Central Intelligence Agency and the intelligence organizations of the Departments of State and Defense, the NSA, and the AEC.

Concurring:

The Deputy Director of Central Intelligence

The Director of Intelligence and Research, Department of State

The Director, Defense Intelligence Agency

The Director, National Security Agency

The Assistant General Manager for National Security, Atomic Energy Commission

Abstaining:

The Assistant Director, Federal Bureau of Investigation, the Special Assistant to the Secretary of the Treasury, Department of the Treasury, the subject being outside of their jurisdiction.

~~Warning Notice~~
Sensitive Intelligence Sources and Methods Involved

~~Additional Warning~~
~~NATIONAL SECURITY INFORMATION~~
~~Unauthorized Disclosure Subject to Criminal Sanctions~~

~~Classified by 014522~~
Exempt from general declassification schedule of E.O. 11652 exemption category:
~~§ 58(1), (2), and (3)~~
Automatically declassified on:
~~Date Impossible to Determine~~

~~TOP SECRET~~

APPROVED FOR RELEASE
CIA HISTORICAL-REVIEW PROGRAM

NIE 11-8-73

SOVIET FORCES FOR INTERCONTINENTAL ATTACK

CONTENTS

	Page
KEY JUDGMENTS	1
THE ESTIMATE	7
General	7
Present Intercontinental Ballistic Missile Forces	7
Operational Considerations	10
Target Sectors	10
Intercontinental Ballistic Missile Development Programs	11
The SS-X-16	11
The SS-X-17	12
The SS-X-18	12
The SS-X-19	13
New Silo Programs	13
Goals of the Intercontinental Ballistic Missile Force Modernization Program	15
Submarine Launched Ballistic Missile Forces	16
Y-Class	17
D-Class	17
Older Systems	17
Patrol Patterns	17
Future Submarine-Launched Ballistic Missile Systems	18
Heavy Bombers and Tankers	18
Backfire	18
Implications for Soviet Policy of the Present Strategic Effort	20
Illustrative Future Forces	22
Likely Soviet Courses of Action	24
Implications of the Future Forces	24

APPROVED FOR RELEASE
CIA HISTORICAL-REVIEW PROGRAM

SOVIET FORCES FOR INTERCONTINENTAL ATTACK

KEY JUDGMENTS

The Soviets are now well into a broad range of programs to augment, modernize, and improve their forces for intercontinental attack.[1] This round of programs—which follows hard on a large-scale, sustained deployment effort that left the USSR considerably ahead of the US in numbers of intercontinental ballistic missile (ICBM) launchers and in process of taking the lead in submarine launched ballistic missile (SLBM) launchers—was conceived long before the Interim Agreement was signed in May 1972, and most of the programs involved were already evident or foreseeable at that time. Nevertheless, they represent a breadth and concurrency of effort which is unprecedented, particularly in the field of ICBM development. Questions thus arise

[1] This Estimate is concerned with the major elements of Soviet strategic attack forces specifically intended for intercontinental attack—ICBMs, certain SLBMs, and heavy bombers. The present size and composition of these forces are summarized in paragraphs 3 (and accompanying table), 49 and 58 of the Estimate. Other Estimates, e.g., NIE 11-10-73, "Soviet Military Posture and Policies in the Third World," and the NIE 11-13 and 11-14 series dealing with Warsaw Pact forces for operations in Eurasia, discuss other forces with some strategic and tactical intercontinental capabilities.

concerning Soviet willingness to accept additional limitations on their intercontinental attack forces and the potential effect on the strategic balance if such limitations are not imposed.

The Soviets are presently testing four new ICBMs—one as a follow-on to the SS-13 and probably also as a mobile missile, one as a follow-on to the SS-9, and two as replacements for the SS-11. All four incorporate new guidance and reentry systems, and two of them a new launch technique.[2] Three have been tested with multiple independently targetable reentry vehicles (MIRVs), though two of these three have also been tested with single RVs. The other employs a post-boost vehicle (PBV) which could be used to dispense MIRVs, but all tests to date have been with a single reentry vehicle (RV). If testing proceeds smoothly, all could be ready to begin deployment as early as 1975 or soon thereafter.

Meanwhile, the Soviets have begun introducing a new version of the widely deployed SS-11, with three non-independently targetable reentry vehicles (MRVs), at three complexes in eastern Siberia and two in the Ukraine. At the latter complexes, existing SS-11 silos are now being converted, either for the SS-11 variant or for one of the follow-on missiles. Conversion of existing SS-9 silos to accommodate the SS-9 follow-on has also begun at one complex.

Production of the 12-tube D-class submarine, with its 4,200 nm missile, is continuing apace, with construction of a stretched version large enough to carry 16-18 tubes now under way. In addition, the Soviets are well along with the development of a longer range (1,600 nm) missile with MRVs for the widely deployed Y-class submarine and are preparing to test a follow-on to the larger missile carried by the D-class.

The new swing-wing strategic bomber we call Backfire is being introduced into Long Range Aviation (LRA). All Agencies but *Army* and *Air Force* believe it best suited for peripheral missions,

[2] The Assistant Chief of Staff, Intelligence, USAF, believes that the new missile systems now under test which use the cold launch technique will be likely to have a refire capability. See his footnote to paragraph 48 of the Estimate for further discussion.

and *CIA* and *Navy* believe it is primarily intended for this role. *Army* and *Air Force* believe that Backfire is suitable for a variety of missions including intercontinental attack, but that it would be prudent to await additional evidence before making a judgment on its primary role.

The present Soviet activity doubtless reflects in part internal bureaucratic and technological drives and the concerns of a country which still sees itself in a dynamic strategic competition with the US and also has concerns about China and other potential foes. However, the present Soviet effort involves more than can readily be explained as merely trying to keep up with the competition.

On the one hand:

— The Soviets have long indicated a need to catch up in MIRVs and other aspects of technology if they are to continue to be accepted as strategic equals of the US. They appear genuinely concerned about such US programs as Trident, B-1, and SRAM.

— Increased concern for survivability is reflected in development of harder silos and launch control facilities for the new Soviet ICBMs and probably figured in the apparent Soviet interest in land mobile ICBMs, in the desire to expand the SLBM force, and in introduction of the long-range missile for the D-class submarine.

— The Soviet emphasis on MIRVs and the apparent interest in greater targeting flexibility for ICBMs probably reflect an expectation of a growing requirement to plan for various contingencies, increasingly involving China and perhaps other peripheral targets as well as the US.

— In this connection, analysis completed within the last year indicates that though all Soviet ICBMs can be directed against the US, over 300 standard SS-11 silos—roughly the last third of the force to be deployed—were specifically oriented so as also to provide full coverage of China or more extensive coverage of other peripheral areas. The broad targeting flexibility of the SS-11 which makes this possible has been further ex-

tended with the new SS-11 variant now being deployed—and presumably also with the new ICBMs.

On the other hand, Soviet actions almost certainly reflect a hope that vigorous pursuit of their opportunities under the Interim Agreement and any subsequent accords that may be achieved will enable them to improve their relative position vis-à-vis the US. Though they have probably not decided whether they could get away with it, their objectives probably include an opportunistic desire to press ahead and achieve a margin of superiority if they can. Thus:

— The MIRVing of the large SS-9 follow-on, the SS-X-18, and evident Soviet interest in greater accuracy for ICBMs almost certainly reflects a desire for improved ability to strike at US strategic forces—a factor long stressed in Soviet strategic doctrine.

— The Soviets must recognize that extensive MIRVing of their ICBMs would threaten to leave the US behind in independently targetable weapons, as well as in delivery vehicles.

— Each of the new ICBMs has substantially more throw weight than the missile it is evidently designed to replace. Deployment of the new systems in large numbers would thus provide the USSR with an even greater advantage in missile throw weight than now exists.

In sum, the Soviets have been laying the groundwork for very substantial improvements in already large and formidable intercontinental attack forces. This process is not yet irreversible, and the Soviets may prove willing to accept some curbs on it within the broader context of their détente policy. Nevertheless, they have shown little disposition to exercise voluntary restraint.

How far the Soviets will go in carrying out current programs will depend in the first instance on the outcome of SALT II and, in particular, on how successful the US is in persuading them that they cannot have both substantially improving strategic capabilities and the benefits of détente, simultaneously and indefinitely; that unrestrained pursuit of present programs will provoke offsetting US

reactions which could jeopardize their competitive position; and that restraint on their part would be reciprocated.[3]

In absence of a new agreement constraining the Soviet strategic buildup, the Soviets will presumably continue most of the broad array of programs now under way. Moreover, they are continuing to expand their large research and development facilities. Early development is probably already under way for new or improved follow-ons for the new missile systems now in flight test.

Our examination of various ways in which such a buildup might proceed leads us to believe that under no foreseeable circumstances in the next 10 years are the Soviets likely to develop the ability to reduce damage to themselves to acceptable levels by a first strike against US strategic forces. The Soviets would have to calculate that the US would be able to make a devastating reply to any Soviet surprise attack.

Except with a minimal effort, however, the Soviets, if unconstrained, are likely by the early 1980s to surpass programmed US forces in numbers of missile RVs and increase their considerable superiority in missile throw weight, while retaining their advantage in numbers of delivery vehicles. These static measures of strategic power would convey an image of a margin of Soviet superiority to those who ascribe high significance to these measures.

In addition, the Soviet strategic forces now being developed—whatever their specific makeup—will probably have better counterforce capabilities than the present ones. How much better will probably remain a matter of considerable uncertainty.

— Unless Soviet ICBMs obtain better accuracies than [redacted] they would have to assign more than one weapon to each target to disable a large portion of the US ICBM forces.

[3] See SNIE 11-4-73: "Soviet Strategic Arms Programs and Détente: What Are They Up To?" dated 10 September 1973, TOP SECRET, ALL SOURCE, for a further discussion of Soviet strategic policies and programs in the present context of SALT negotiations and détente.

— However, we will probably be unable to determine the accuracies of the new Soviet ICBMs with confidence. And we will probably remain uncertain about both the feasibility of attacking targets with more than one weapon, which involves some technical problems, and about Soviet willingness to rely on this tactic.

— All in all, the strategic relationship over the next decade is likely to be much more sensitive to uncertainties like these than to more readily measurable factors such as launcher or weapon numbers. More than ever, the strategic, and especially the political impact of the Soviet buildup will probably depend a great deal on how it is perceived abroad, in the US and elsewhere.

THE ESTIMATE

GENERAL

1. The Soviets are now well into a broad range of programs to augment, modernize, and improve their forces for intercontinental attack. This new round of programs—which follows hard on a large-scale, sustained deployment effort which left the USSR considerably ahead of the US in numbers of ICBM launchers and in process of taking the lead in SLBM launchers—was conceived long before the Interim Agreement was signed in May 1972, and most of the programs involved were already evident or foreseeable at that time. Nevertheless, at least in the field of ICBM development, they represent a breadth and concurrency of effort which is virtually unprecedented. Questions thus arise concerning Soviet willingness to accept additional limitations on their intercontinental attack forces and the potential effect on the strategic balance if such limitations are not imposed.

2. This Estimate discusses the makeup and capabilities of currently deployed Soviet forces for intercontinental attack, assesses the status and potential of new weapons under development, and summarizes the factors probably influencing present and future strategic arms policy. It concludes by outlining a set of projections illustrating different ways in which the makeup and capabilities of Soviet intercontinental attack forces might evolve over the years to come.

PRESENT INTERCONTINENTAL BALLISTIC MISSILE FORCES

3. As of 31 December 1973, the Soviets had 1,485 operational ICBM launchers deployed in units at 25 complexes, including 28 soft SS-7 launchers which are at a reduced state of readiness and probably are in the process of being deactivated. In addition, there are 116 launchers still under construction or undergoing modernization or conversion. When the construction and conversion programs are completed, the Soviets will have 1,601 launchers deployed excluding six SS-7 launchers which are no longer considered operational. There is also some evidence that 18 SS-9 launchers at Tyuratam are maintained as a part of the operational force.

Table I

Status of Soviet Intercontinental Ballistic Missile Launchers [a] as of 31 December 1973

System	Deployed Forces					Other	
	Operational	Under Construction, Modernization, or Conversion	Reduced Readiness	Non-Operational	Total Deployed	Test Range Test and Training	Complex Training
ICBM Soft							
SS-7	118	0	(28[b])	6[c]	124	2	0
SS-8	10	0	..	..	10	2	0
SS-11	0	0	..	..	0	1	0
SS-X-17	0	0	..	..	0	1	0
SS-X-18	0	0	..	..	0	1	0
Unidentified	0	0	..	..	0	5[d]	0
SUBTOTAL	128	0	(28)	6	134	12	0
ICBM Hard							
SS-7	66	0	..	..	66	3	0
SS-8	9	0	..	..	9	0	0
SS-9	282	0	..	..	282	22[e]	6
SS-11	940	90[f]	..	..	1,030	10	12
SS-13	60	0	..	..	60	10[h]	1
SS-X-17	0	0	..	..	0	2	0
SS-X-18	0	26[g]	..	..	26	10	0
SS-X-19	0	0	..	..	0	2	0
SUBTOTAL	1,357	116	0	0	1,473	59	19
GRAND TOTAL	1,485	116	(28)	6	1,607	71	19

[a] This Table does not include 21 silos which we believe are intended for command and control, although they appear capable of housing a missile. Eleven of these silos, [ ] were under construction at the time of the signing of the Interim Agreement. The Soviets began construction of the other 10 silos in 1973.

[b] These launchers are at reduced readiness, which may represent the beginning of deactivation. Because most of them could probably be returned to service within a week or so, they are included in the operational totals.

[c] These launchers, all at Itatka, are no longer considered operational.

[d] Four launchers at Plesetsk and one at Tyuratam are not now associated with a specific program.

[e] Eighteen of the SS-9 silos at the Tyuratam test range are probably part of the operational force.

[ ]

[g] Six of these are SS-9 silos being converted to the new large silo configuration.

[h] One, possibly more, of these silos has been used to test the SS-X-16.

4. *SS-9.* With its combination of accuracy and yield, the large SS-9 is the only presently deployed Soviet ICBM with a significant capability to attack hard targets. A total of 288 launchers have been deployed in the field.

Although several research and development (R&D) tests of the Mod 4 took place this year after a two year hiatus, they did not demonstrate the increased flexibility necessary for an effective MIRV system. One SS-9 group at another complex is being converted for the SS-X-18.

5. *SS-11.* The liquid-propellant SS-11 is the rough counterpart of the US Minuteman and has been deployed in comparable numbers. Its effective capability at intercontinental range is limited to attacks on soft targets.

The Mod 3, which has three RVs that cannot be independently targeted, was probably initially intended to facilitate penetration of antiballistic missile (ABM) defenses. It also has greater targeting flexibility and a greater payload than the Mod 1, however, making it more effective against some soft targets.

Development of another variant of the SS-11, the Mod 2, which was designed to counter ABM defenses, has evidently been cancelled.

6. *SS-13.* The USSR's only operational solid-propellant ICBM, the SS-13, is deployed in 60 silos at a single complex. It is less accurate than the SS-11, by our calculations can reach only the northern half of the US, and generally appears to have been a disappointment.

7. *SS-7 and SS-8.* Rounding out the ICBM force are just over 200 SS-7s and SS-8s, deployed on soft sites or in clusters of three silos in the early 1960s. These will have to be deactivated if the Soviets wish to have all of the 950 modern SLBM launchers permitted under the Interim Agreement. Since 1971, equipment or fixed components at 34 of the 124 SS-7 soft launchers have been removed or relocated, so as to suggest deactivation is in process. One small complex with six launchers appears to have been completely taken over by a motorized rifle division within the last year and is believed to be inoperative, although the launch pads have not been removed. The other sites, however, can be restored to full operational status in a short time, as was done in the case of one site. We think the Soviets may have been experimenting in the ways to demonstrate that sites are being dismantled and will wait until there are agreed dismantling procedures before completely phasing these SS-7s out.

OPERATIONAL CONSIDERATIONS

Target Sectors

8. All operationally deployed Soviet ICBM silos are sited to permit use against the US, and the bulk of them are probably intended for that role. New analysis completed within the last year, however, indicates that roughly a third of the SS-11 units in the field [ ] provide extended coverage of China and other peripheral areas as well. We believe that at least some of these—and possibly others—have their primary targets in these areas.

9. [ ]

10. [ ]

11. Although targets in northeast China could be attacked from some previously deployed SS-11 silos, [ ] 190 silos [ ] provide the first full coverage of China. With the deactivation of the 39 medium-range ballistic missile (MRBM) and intermediate-range ballistic missile (IRBM) launchers in the eastern USSR at about the same time these silos were being completed, the SS-11s represent the only land-based missiles available on a time-urgent basis against strategic targets in China and elsewhere in the Far East.

12. [ ] 120 silos [ ] provide the first extensive coverage of the Middle East and the Indian subcontinent as well as Europe and the US. There are a number of reasons for believing that at least some of them have primary targets in Europe. In particular, [ ] hard targets such as the French IRBM silos.

13. The SS-11 Mod 3 has even greater targeting flexibility. [ ] Assuming that follow-on systems now under development have comparably broad target sectors, Soviet strategic planners should have considerable leeway in adapting their attack plans to various circumstances and contingencies.

14. The new analysis reinforces our view that the SS-9, the only other ICBM on which target sectors are known, is targeted primarily against ICBM fields in the US.

15. *Retargeting.* We have no direct evidence on how difficult and time-consuming it is to retarget Soviet ICBMs. We think it likely that Soviet launch crews can direct changes in range and minor changes in azimuth

A major change in targeting azimuth for the SS-9 and SS-7 would require a cumbersome and time consuming process.

16. *Operational Readiness of the Force.* All indications point to a relatively low day-to-day level of readiness for the present Soviet ICBM force, in line with Soviet expectations that any hostilities would be preceded by a period of international tensions in which readiness could be increased as needed.

17. *Command and Control.* The Soviet military command and control networks are designed to provide rapid, timely, and reliable dissemination of commands to the strategic forces. Steady improvements have been made over the last decade in the ability of these networks to survive an enemy nuclear attack. In addition, the Soviets are continuing development of an airborne military command and control system. It seems likely that the airborne posts will be given an operational command role.

INTERCONTINENTAL BALLISTIC MISSILE DEVELOPMENT PROGRAMS

18. The Soviets are presently testing four new ICBMs—one as a follow-on to the SS-13 and probably also as a mobile missile, one as a follow-on to the SS-9, and two as replacements for the SS-11. All four incorporate new guidance and reentry systems, and two of them a new launch technique. Three of them have been tested with MIRVs and the other also employs a PBV which could be used to dispense them. If testing proceeds smoothly, all of them could be ready to begin deployment as early as 1975 or soon thereafter.

The SS-X-16

19. The SS-X-16 is a solid-propellant missile which has been fired at least once from an SS-13 silo and is an obvious candidate to replace that missile. It is about the same size as the SS-13 but lacks the latter's range/payload limitations, in part as a result of using relatively light fiberglass rather than metal motor cases. Most (and probably all) shots have involved a PBV that could be used to carry MIRVs. However, the Soviets have thus far only tested a single RV. Total throw weight at 5,500 nm range would be 2,000-3,000 pounds.

20. The SS-X-16 should be considerably more accurate than the SS-13,[

]

21. There are various indications that the Soviets are developing a mobile as well as a silo-based version of the SS-X-16.[

]

The SS-X-17

22. The SS-X-17 is a liquid-propellant missile which uses a modified SS-11 silo and is one of two possible replacements for that missile. Downrange testing began in September 1972.

23. All but the first five tests of the SS-X-17 have involved a PBV[

]With four RVs, the SS-X-17 would have a throw weight of[ ]

24. The SS-X-17 uses a launch assist device which ejects it from the silo before the main engines ignite, so that no space is required within the silo for venting exhaust gases.[

]

25. The MIRV version of the SS-X-17 will probably not be available before 1975.[

]

If the Soviets elected to develop a single high beta RV version of the SS-X-17, a test program of six months to a year would be required.

26.[

]We believe that the SS-X-17 system can fit into a standard SS-11 silo, which we believe has a usable depth of about 85 feet.[

]

The SS-X-18

27. The largest of the new ICBMs being tested by the USSR, the SS-X-18, has a throw weight[ ]It is intended as a follow-on to the SS-9.[

testing to Kamchatka began in late 1972. Like the SS-X-17, this missile uses a launch assist device to propel it from its silo.

28.

29. The first nine firings of the SS-X-18 each tested a single, blunt RV. The next four tests—in August, September, and October 1973—involved a PBV and probably five RVs. Since then, the Soviets have conducted 3 tests with the single RV and one with MIRVs.

30. The test program for the single RV version of the SS-X-18 is well ahead of that for the MIRV version. We estimate that the SS-X-18 equipped with a single RV could be available for deployment in 1975. Unless the Soviets quicken the pace of MIRV testing, that version probably will not be available until the following year.

The SS-X-19

31. Another potential replacement for the SS-11, the SS-X-19, underwent testing April of 1973. Our knowledge of its characteristics is scanty. We know that it does not employ a launch assist device.

32. On all flight tests to Kamchatka, the SS-X-19 has carried a PBV and a MIRV payload. data indicate that the SS-X-19 carries six RVs.

33. There is good evidence that the SS-X-19 requires a deeper silo than the SS-11. The silo used for two short-range silo compatibility tests of the SS-X-19 in 1972 was a former SS-11 silo which had evidently been deepened. All flight tests to Kamchatka have come from new small silos which are deeper than we believe SS-11 silos to be.

NEW SILO PROGRAMS

34. Four types of new silos or silo modifications can be related to the new missile programs now under way.

35. Two modified SS-11 silos at Tyuratam have been used for all firings of the SS-X-17. They are equipped with hinged, plug-type doors in place of sliding doors—a change

which makes them somewhat harder. Their inner diameter at the top is about 11 feet, as compared with about 14 feet for SS-11 silos.

36. The other three types of silos are of a new, harder configuration on which construction began in late 1970 at Tyuratam and seven operational ICBM complexes. The walls of all three types are constructed by installing segments formed by heavy metal reinforcing rods attached to an inner steel liner and then filling the space between the liner and the silo core with concrete. The headworks are formed from heavy steel components. They all have hinged, plug-type doors that fit flush with the surface.

37. *The new small silo (the Type III-G silo)* has an internal diameter of 13 to 14 feet, and measurements of silo components lead us to believe that it has an overall depth of about 100 feet and a usable depth of about 90 feet—some five feet deeper than a standard SS-11 silo. Four prototype silos of this type—three of them converted SS-11 silos—are at Tyuratam, and 60 are deployed in groups of 10 at Derazhnya and Pervomaysk, three groups at each complex. These silos in the field are being initially equipped with the SS-11 Mod 3, all of whose test firings over the last two years were from III-G silos. Type III-G silos, however, have also been used for all downrange flight tests of the SS-X-19, making it a candidate to replace these Mod 3s when development is completed.

38. One group of standard SS-11 silos at Derazhnya and one group at Pervomaysk are being converted to a new configuration which uses headworks and doors of the type used in III-G silos. It does not appear, however, that the heavy type III-G silo wall segments will be installed and it is not yet clear whether these silos will be deepened. If they are not deepened, the converted silos could accommodate the SS-11 Mod 3, but not the SS-X-19.

39. *The new large silo (Type III-F)* has an interior diameter of 19 to 20 feet which narrows to about 16 feet at the top, and it appears to have a usable depth of about 144 feet. Ten silos of this type, two of them converted SS-9 silos, have been used for testing of the SS-X-18 at Tyuratam. Twenty more have been under construction in the field since late 1970—four at each of five SS-9 complexes. In early 1973 a group of six SS-9 silos at the Dombarovskiy complex began undergoing conversion to the new configuration.

40. *A second type of new large silo (Type III-X)* has the same inner diameter as the III-F, 19 to 20 feet. It also narrows to about 16 feet at the top. It differs from the III-F, however, in that it has a circular rather than a rectangular door, appears to be only about 130 feet deep, and has associated construction not present with the III-F.

41. We believe that the III-X silo is intended to house a launch control capsule. In all cases, a single III-X silo has been collocated with a group of III-F or III-G silos. The new small silos at Derazhnya and Pervomaysk, all of which are now externally complete have no other discernible launch control facilities.

large canisters and apparently related equipment have been observed near III-X installations at Tyuratam

and at the two complexes where III-X silos are collocated with the new small III-G silos.

42. The use of a silo to house launch control facilities is the only reasonable explanation of the appearance in 1973 of a silo excavation adjacent to the launch control facility of 10 of the 12 original SS-11 launch groups at Derazhnya and Pervomaysk. It is highly unlikely that the Soviets, if they decided to breach the Interim Agreement's ban on new fixed ICBM launchers, would do so in so blatant a fashion. Although construction has not progressed sufficiently for us to determine their eventual size and configuration, we believe that these silos will turn out to be III-Xs or variants thereon.

GOALS OF THE INTERCONTINENTAL BALLISTIC MISSILE FORCE MODERNIZATION PROGRAM

43. Several broad goals are discernible in the current modernization activities. Greater survivability and hence greater Soviet confidence in the survivability of their strategic nuclear deterrent will result from new silo construction programs, from hardened and airborne command and control, and from the development—if continued—of a mobile ICBM. New guidance systems and the introduction of MIRVs will provide improved flexibility and the capability to attack a considerably larger number of targets. The capability to attack large numbers of hard targets will also be possible although it is too early to judge with a high degree of confidence the accuracies or yield of RVs carried by the new systems. These improvements have been accompanied by advances in propulsion and development of a new launch technique.

44. The new ICBM silos are considerably harder than any the Soviets have built in the past. In general, the new silos are better protected against high blast overpressures, electromagnetic effects, and, perhaps, also from ground shock, than their predecessors.

45. The provision of a MIRV capability for all four systems under development will greatly increase the number of targets that would be attacked if the USSR were to strike first, and the potential coverage of those ICBMs which would survive if the US were to strike first. The new systems will also provide greater flexibility in targeting. We assume that all new systems will have broad target sectors like the SS-11 Mod 3. In addition, the SS-X-18 and SS-X-19 are designed so that permit rapid retargeting from one point in the US to another with only minimal degradation in accuracy.

46. The Soviets also appear to be seeking improved ICBM accuracy. In contrast to the blunt RVs typical of the past, RVs having ballistic coefficents greater than 1,000 psf have been tested with all four new ICBMs, thereby reducing an important obstacle to achievement of high ICBM accuracy, reentry error.

47. We have little evidence regarding the accuracy of any of the new ICBMs. It would be reasonable, however, to estimate that they are at least somewhat better than the best of the present systems[

] we estimate that the new systems are capable of achieving CEPs of about 0.25 nm—although it may take several years of additional flight testing after IOC to reach that level of accuracy. We believe it is unlikely that the Soviets could achieve CEPs as low as 0.15 nm before the end of this decade or early in the next. This would require considerably more component improvement or system modification than we think is represented in missiles currently being tested.

48. Two of the new missiles being tested, the SS-X-17 and the SS-X-18, use a launch assist device which ejects the missile from the silo before the main engines ignite, so that no space is required within the silo for venting exhaust gases. This permits the use of silos of smaller diameter and, at least with the SS-X-18, greater hardness, than would be possible with similar missiles using the conventional hot launch technique. The new technique would also permit silos to be refurbished and reloaded more rapidly than in the case of a hot launch, since they would not be damaged by flames and hot gases. We do not believe, however, that the Soviets intend to provide a refire capability for these or other deployed silo based ICBM systems, as they have for older soft ICBM systems.[

]4

SUBMARINE LAUNCHED BALLISTIC MISSILE FORCES

49. As of 31 December 1973, the Soviets had 582 SLBM launchers on 44 nuclear submarines which have reached operational status, plus at least another 180 launchers on units still

4 The Assistant Chief of Staff, Intelligence, USAF, believes that the two new missiles now under test which use the cold launch technique will likely have a refire capability. He notes the Soviets have long placed emphasis on the missile refire principle as evidence in their MR/IRBMs, the SS-6, the soft and hard launchers for the SS-7 and the hardened SS-8. Over the years there have been extensive firings of various types of ICBMs from operational silos, followed by refurbishment and reloading of the silo. At Tyuratam, all of the fourteen SS-X-17 firings noted to date have been from two converted SS-11 silos using the new cold launch technique. Analyses[

conclude that use of the new launch technique would permit refire in 12-24 hours.[

]Canisterizations of the new missiles also permits their easy transportation from storage areas many miles from their launch silos.

At least two significant strategic advantages accrue from a refire capability. ICBM firepower is effectively increased, while remaining within the limits of the SAL Agreement. In addition the Soviets could employ part of their ICBM force in a third country conflict—say, for example, against China—and quickly reconstitute that force for deterrent refire capability against the US.

under construction, fitting out, or on sea trials. There are also 70 launchers on older diesel units.

Y-CLASS

50. Although production of the 16 tube Y-class submarine probably ended last summer, the 33 Y-class units with their 528 tubes will make up the bulk of the SLBM force for some years to come. The Y-class has thus far been armed with the SS-N-6 missile, which has a maximum range of about 1,300 nm. However, testing of a newer Mod 2 version—which has a demonstrated range of 1,600 nm—began in October 1972. Two versions, one with a single RV and one carrying 2, possibly 3, non-independently targetable RVs, have been observed.

D-CLASS

51. Two 12 tube D-class units, carrying the long-range SS-N-8 missile, have now joined the fleet, and production of additional units, at an expected combined rate of seven a year, is continuing at both Severodvinsk and Komsomolsk.

52. An important change in our evaluation of D-class capabilities has been necessitated by three of the final developmental firings of the SS-N-8 in late 1972 which demonstrated a capability of 4,200 nm (NRE). Previous firings had gone no further than 3,100 nm. Meanwhile, Agency differences persist as to the accuracy of the SS-N-8 system. Navy continues to estimate a system CEP [ ] at full range. All other Agencies believe that the systems accuracy is considerably poorer, on the order of [ ]

OLDER SYSTEMS

53. Still in service are 31 ballistic missile submarines built between 1958 and 1962, 22 of them diesel powered. One converted H-class nuclear-powered unit was used for developmental testing of the SS-N-8. One diesel G-class unit has been converted into a test bed for the SS-NX-13 antiship missile, and another is apparently intended for testing a missile the size of the SS-N-8.

PATROL PATTERNS

54. Only a small portion of the SLBM force is normally at sea, in line with readiness levels in other strategic components and the Soviet view that hostilities would come only after a period of international tension. Even allowing for an additional Y-class patrol off the US west coast which was added last August, only four Y-class units, two off each coast, are normally on station. Allowing for ships in transit, only five or six Y-class units are at sea at any time as compared to about 20 US ballistic missile submarines. This imbalance is only slightly offset by continuation of some H- and G-class patrols. Although G- and H-class units continue to appear off the east coast of the US, the G-class units in the Pacific have been gradually moved to a new base on the Sea of Japan, and are probably now targeted against China and US bases in the Far East.

55. There is as yet no direct evidence on how the Soviets will employ the D-class. It is probably intended primarily for use against the US. D-class units could cover most targets in the US, and peripheral ones as well, without even leaving port but we think they will use patrol patterns promising better survivability. They might, for example, attempt to develop sanctuary areas which could be screened off against hostile antisubmarine warfare (ASW) activities. Alternatively, they might take advantage of the SS-N-8's range by using broad ocean areas.

FUTURE SUBMARINE-LAUNCHED BALLISTIC MISSILE SYSTEMS

56. To approach the limit of 950 modern SLBM launchers on 62 submarines allowed under the Interim Agreement will require introduction of a submarine with more than the 12 tubes of the D-class.

The lead unit of this version will probably be launched in 1975.

57. There are continuing indications that the Soviets are working on a follow-on missile or missiles.

HEAVY BOMBERS AND TANKERS

58. The heavy bombers and tankers of Soviet LRA number 110 turboprop Bears, 70 of them equipped with the 275 nm AS-3 Kangaroo missile and five configured for reconnaissance, and 85 turbojet Bisons, about 50 fitted out as tankers. The force has remained at about the present size for the past decade, in marked contrast to the growth of Soviet ICBM and SLBM forces. Soviet heavy bomber units continue to train for a variety of missions, including attack of enemy naval forces and reconnaissance as well as the primary one of intercontinental attack. The Bison tankers are sometimes used to refuel Bears of Naval Aviation as well as the 50 Bears and 35 Bisons in LRA equipped for aerial refueling.

BACKFIRE

59. Testing of the new twin-engine swing-wing bomber that we call Backfire is apparently complete, and series production has begun, probably of a modified version designated Backfire B, which was first identified in 1971. All Backfires that we have seen so far have been equipped with a refueling probe.

60. An engineering analysis of the Backfire B completed in 1973 calculates that its maximum unrefueled radius would be 3,150 nm with a 6,600 pound bomb load flying subsonically at high altitude with its wings fully extended; or 2,700 nm flying subsonically at high altitude, then descending to low altitude for a 200 nm subsonic run into and out of the target area. The study further calculates that the maximum unrefueled radius of the earlier version of Backfire with the same bomb load and flying a subsonic high-altitude profile would be 2,850 nm instead of 3,000 nm previously estimated. *DIA, Army,* and *Air Force* believe that this analysis should be accepted as the best available estimate of Backfire performance based on existing data.[5]

[5] The Assistant Chief of Staff, Intelligence, USAF, believes that the Backfire has been subjected to the most extensive independent analyses of any Soviet bomber in history. These analyses were conducted in 1972

All support the conclusion that the Backfire's range is nearly comparable to that of the Soviet Bison heavy jet bomber. Also, the maximum unrefueled radius for the Backfire in the referenced study is 90 percent greater than that of the Tu-16 Badger, 70 percent greater than that of the B-58 Hustler, and 125 percent greater than that of the FB-111.

61. On the other hand, another engineering analysis of the Backfire B also carried out in 1973 results in range performance that is somewhat lower in both the subsonic speed missions than in the other study. The new study shows an unrefueled radius of about 2,750 nm for the subsonic, high-altitude mission and unrefueled radius of about 2,300 nm for the case with the subsonic low altitude run in to the target area.

62. There has not been sufficient time during the preparation of this Estimate for detailed evaluation of the differences between the two analyses. Neither of these analyses has been corroborated [

]

63. With respect to the intended role of the Backfire, *Army* and *Air Force* believe that it is suitable for a variety of missions including intercontinental attack, but that it would be prudent to await additional evidence before making a judgment on its primary role. All but *Army* and *Air Force*, on the other hand, believe Backfire is best suited for Eurasian strike options and *CIA* and *Navy* believe it is primarily intended for that role.

64. With its capability for sustained, high-speed, low-level penetration, Backfire appears ideally suited for use on two-way missions against Europe and China, both areas of continuing concern to the Soviets. Introduction of Backfire, with the qualities noted above and its superior combat radius, will facilitate execution of the large-scale conventional bombing operations the Soviets apparently plan to carry out in the opening phase of war with NATO and provide for a range of conventional and nuclear operations against China. Backfire should have a significant potential against naval task forces, and it is likely to appear in Naval Aviation units as well as in LRA units with antiship tasks. We thus expect significant numbers to be deployed, regardless of whether any are for use against the US.

65. In the view of all but *Air Force*, the case for use of Backfire in the intercontinental role is less persuasive. Even with a 3,150 nm maximum radius, Backfire would require both Arctic staging and aerial refueling to achieve comprehensive coverage of the US using realistic two-way flight profiles. Such missions are possible—in *DIA's* view some Backfires will probably be assigned in such fashion—and even one-way missions cannot be ruled out. All but *Air Force* believe it unlikely, however, that the Soviets, at this stage of their strategic buildup, would develop an aircraft for major employment in the intercontinental role which had so little flexibility in achieving the requisite range. In any event, a new tanker force would have to be created for Backfires to be used on two-way intercontinental missions in sizable numbers. Existing Bison tankers are presumably already committed, and conversion of the remaining 35 Bisons would be enough to support only a limited Backfire force.

66. In *Air Force* view, Backfire's capabilities would make it an excellent vehicle for intercontinental operations. Backfire, like the Bison, would require Arctic staging and in-flight refueling to achieve comprehensive coverage of the US on two-way missions, but, unlike the Bison, it could also carry out a supersonic dash into and out of the target area. On a range mission, with recovery in friendly or neutral countries to the south, Backfire's mission profile could include a 1,500-2,000 nm subsonic, low-altitude leg or a 1,000 nm supersonic dash (Mach 2) high-altitude leg over CONUS if refueled in flight and staged. Unrefueled, but staged, Backfire could reach northern South America on a high altitude, subsonic profile. *Air Force* believes that the deployment of Backfire at about the same time that the SS-11 Mod 3 and the D-class/SS-N-8 are reaching initial deployment, reflects a Soviet decision of the mid-1960s to equip each element of its strategic offensive forces with a weapon system capable of both peripheral and intercontinental operations.

67. We have no evidence that a new heavy bomber program is under way. If the Soviets do decide to develop a heavy bomber, we would expect to become aware of its existence four to five years prior to its reaching operational status.

IMPLICATIONS FOR SOVIET POLICY OF THE PRESENT STRATEGIC EFFORT

68. A number of factors have probably figured in the decisions to press ahead with the broad array of strategic programs now under way. Despite their lead in launcher numbers, the Soviets have been behind the US in MIRVs, ICBM accuracies, and other aspects of weapons technology. Given their manifest concern with being accepted as at least the strategic equal of the US, they have had strong political incentives to press on with improved weapon systems.

69. Increased concern for the survivability of Soviet strategic attack forces is reflected in the development of harder silos and launch control facilities for the new Soviet ICBMs, and probably figured to some degree in apparent Soviet interest in mobile ICBMs, in the desire to expand the SLBM force, and in the introduction of the long-range SS-N-8. The introduction of MIRVs with higher betas and potentially improved accuracy, particularly for the SS-X-18, almost certainly reflect a desire to improve Soviet hard target counterforce capabilities. Introduction of a number of MIRV systems, together with apparent concern for greater targeting flexibility, probably also reflects an expectation of growing targeting requirements against China as well as a large number of urban industrial targets throughout the free world.

70. A decision to press ahead simultaneously across a broad front probably further recommended itself as the easiest way to accommodate competing drives within the party leadership and military and defense production ministries and to overcome reservations about arms control and détente held by principals within those groups.

71. Above all, the vigor of the present strategic effort bespeaks a highly competitive concept of the USSR's strategic relationship with the US, even in the context of the policy of détente to which Brezhnev has increasingly committed himself. Despite the propagandistic

nature of Soviet commentary on projected new US weapon systems and the bargaining chip approach to SALT, there is probably genuine concern that the USSR could fall behind strategically or lose some of its own bargaining leverage if it failed to fully hold up its side of the strategic competition. The Soviets almost certainly also hope, however, that vigorous efforts to develop new strategic weapons will enable them to improve their relative strategic position. In sum, the Soviets are almost certainly pursuing a strategic policy they regard as simultaneously prudent and opportunistic, aimed at assuring no less than the continued maintenance of comprehensive equality with the US while at the same time seeking the attainment of some degree of strategic advantage if US behavior permits. The Soviet leaders have specifically justified a long period of détente as affording opportunity for them to improve their economic and military position.

72. Except as limits are agreed to in SALT, the Soviets will probably wish to continue strategic force development along the lines already staked out. The institutional momentum behind present programs is likely to increase as the investment in R&D and in long lead time items increases. In any event, they are clearly intent on driving as hard a bargain as possible in SALT and on taking full advantage of opportunities to build up their forces in the meantime.

73. As for the longer term, the R&D establishment is strong and well-funded. From a military requirements standpoint, the Soviets will probably not achieve all the qualitative improvements they desire in a single generation of new weapons.[6] Changing circumstances—e.g., the growing Chinese strategic capabilities, an increasing threat to silo-launched ICBM systems from highly accurate US MIRVs, the effect of stringent ABM limits on damage limiting capabilities—could lead to new goals and approaches. Finally, depending on the competitive relationship with the US, the need to maintain the present level of economic commitment to strategic forces may appear less pressing in the future, when the problem will be less one of building up the USSR's strategic arsenal than of replacing existing weapons with more complicated and expensive ones.

74. How far the Soviets will go in carrying out these lines of development will depend in the first instance on the SALT II negotia-

[6] The Assistant Chief of Staff, Intelligence, USAF, believes that in addition to the four new Soviet ICBMs currently in test, intelligence relative to a broad spectrum of activities in the Soviet R&D base indicates that as many as five new missiles will probably be tested in the 1974-1978 time period. He believes that there are also tenuous indications, [ ] that other follow-on systems could enter test in the early 1980s. Since 1963, the Soviets have introduced at least 13 major new offensive ballistic missile systems into test. During this period Soviet missile-related production facilities have expanded at a rate of over one million square feet per year. Missile-related R&D facilities have doubled in size during the same time period. These facilities include over 30 production centers and 32 rocket engine test complexes with over 100 rocket engine test stands. Based upon a large number of historically verified indicators, and the existing capacity of Soviet R&D and production facilities, he believes that it is possible to forecast more than a dozen new ballistic missile systems or major modifications thereto being placed into test by 1983. While this is consistent with the rate of Soviet development during the past decade, it does not address the implications of a near doubling in the Soviet missile R&D and production base since 1963.

tions. At this point, however, we have no good way of forecasting what specific limitations on Soviet forces a permanent agreement, if achieved, would entail.

ILLUSTRATIVE FUTURE FORCES

75. To illustrate various ways in which the Soviet buildup of intercontinental attack forces might proceed if a permanent agreement imposing further limits on strategic offensive arms is *not* achieved, we have developed four force projections which are laid out in some detail in the Supporting Analysis. In one case we assume abrogation of the Interim Agreement in 1975. In the other three force projections we assume continuation of the Interim Agreement's constraints into the 1980s.[7]

76. Since all of the force projections proceed from a common developmental base, they have many features in common. However, they differ significantly in the number and characteristics of the weapons they provide and in the pace of the force buildups involved.

77. *Force 1*—This force is based on the assumption that the USSR abrogates the Interim Agreement in 1975 as a result of failure of the US and USSR to reach a permanent agreement; it presupposes an environment of increased US-Soviet hostility in which the Soviets are either striving for a wide margin of strategic advantage or are seeking to offset an anticipated sharp upswing in the US strategic effort. It assumes that the Soviets pursue all attractive options, successfully push the limits of their technology, and deploy at the highest rates demonstrated in the past. As such, it represents a kind of limiting case. The development of Force 1 to 1982 is distinguished by:

- A high rate of conversion to the new silo/missile systems and of introduction of other new weapons.
- The addition of almost 200 new large silos for the SS-X-18, bringing the total to 480.
- Achievement of [ ] CEP with the first generation of new missiles and the introduction in 1979 of follow-on ICBMs with a CEP of [ ]
- Deployment of 450 mobile SS-X-16s.
- Introduction of a new 20-tube nuclear-powered ballistic missile submarine (SSBN) with an SLBM which has 6 MIRVs.
- Introduction of a new heavy bomber in the Bear range/payload class.

78. By mid-1977 Force 1 would provide nearly 2,700 delivery vehicles with more than 5,000 weapons. By 1982 there would be over 3,500 delivery vehicles with some 17,000 weapons, many of them highly accurate ICBM RVs. Force 1 would have formidable counterforce capabilities as well as a comfortable margin of strategic forces for handling peripheral contingencies in addition to targeting requirements in the US.

79. *Force 2*—Force 2 assumes that the Interim Agreement is extended into the early 1980s and that the Soviets pursue all options permitted by it. Like Force 1 it is a kind of limiting case in that it assumes that the So-

[7] It should be noted that these projections, which have been developed primarily for broad policy use at the national level, are meant to represent different kinds of programs the Soviets might carry out under varying circumstances rather than to provide a definitive set of alternatives. Other projections, specifically designed for military planning in the Department of Defense, are contained in the Defense Intelligence Projections for Planning (DIPP). See paragraph 188, Supporting Analysis.

viets successfully push the limits of their technological capabilities and deploy new weapon systems at the highest rates demonstrated in the past. It differs from Force 1 in two aspects; no new ICBM silos are constructed and expansion of sea-based systems ceases when 62 SSBNs and nearly 950 SLBMs are deployed.

80. In 1982 Force 2 would have nearly 3,000 delivery vehicles including 450 mobile ICBMs. There would be some 13,800 weapons in the force, including a large number of accurate MIRVs which would provide strong counterforce capabilities. Overall, the strategic capabilities of Force 2 would be quite comparable to those of Force 1.[8]

81. *Forces 3 and 4*—Forces 3 and 4 attempt to bracket the kinds of force improvements we judge the Soviets would be likely to undertake if the provisions of the Interim Agreement remained in effect through 1982. They are generally similar but differ in the pace at which new weapons are deployed and qualitative improvements such as higher accuracy are achieved. The deployment rates postulated for new ICBM systems in Forces 3 and 4 are comparable to the average rates of deployment for the SS-9 and SS-11 systems during the mid- and late-1960s. For Force 3 we assume somewhat faster rates than the average rates demonstrated in the past and for Force 4 slightly slower rates.

[8] The deployment of mobile ICBMs, while not specifically prohibited by the Interim Agreement, was addressed at SALT in a US unilateral statement that "the US would consider the deployment of operational land-mobile ICBM launchers during the period of the Interim Agreement as inconsistent with the objectives of that Agreement". A Soviet decision to proceed from development to deployment of mobile ICBMs, and the scope and extent of such deployment, will probably depend to a large extent on the situation at SALT.

82. Force 3 assumes a fairly vigorous competitive effort, but with the Soviets not going quite as far as in Force 2 in making the most of the technological opportunities available under the Interim Agreement's provisions. Its development to 1982 is characterized by:

— A relatively high rate of conversion to the new silo/missile systems and follow-on SLBM systems.

— Achievement of [ ] CEP with the first generation of new missiles to be deployed and subseqent improvements to [ ] with follow-on versions in 1979.

— Deployment of 150 mobile SS-X-16s.

83. Force 4 assumes a tempering of the strategic competition that results in a steady but less intensive pattern of force improvements. Its development to 1982 is characterized by:

— A slower pace of conversion to the new silo/missile systems and follow-on SLBM systems than in Force 3.

— Initial ICBM accuracies of [ ] with accuracies of [ ] not achieved until follow-on versions of the new missiles are introduced in 1981.

— No deployment of mobile SS-X-16s.

84. Given the launcher constraints of the Interim Agreement, both forces would end up with approximately the same number of delivery vehicles. They vary substantially, however, in the number of weapons they provide. Force 3 would have some 4,000 weapons in 1977 and increase to over 10,000 in 1982. Force 4 would have about 2,500 weapons in 1977 and 5,700 in 1982. By virtue of its relatively high number of weapons and the relatively high accuracy postulated for them, Force 3 would have significantly greater hard-target potential than Force 4.

LIKELY SOVIET COURSES OF ACTION

85. The foregoing projections illustrate that there is a broad range of ways in which the Soviet strategic buildup might proceed in the absence of a permanent SAL agreement. Given the investment which both sides have made in SALT and the general improvement in relations, the odds are substantial against the emergence of the troubled circumstances postulated for Force 1 even if the US and USSR fail to agree on permanent limitations on offensive arms in 1974. It is more likely that the parties would continue negotiations, at least until the Interim Agreement ran out in 1977. Nevertheless, we cannot rule out the possibility that a deadlock in SALT, coupled with growing US-Soviet antagonism on other issues, could produce such a drastic result. In any event it is highly unlikely that the Soviets would be completely successful in achieving all of the improvements postulated in Force 1.

86. Similarly, we believe that the Soviet strategic posture depicted by Force 2, which assumes extension of the Interim Agreement, is also an unlikely development. Like Force 1, Force 2 assumes levels of activity considerably greater than the Soviets have consistently sustained to date in terms of technological progress and weapons deployments.

87. Barring an early breakdown of the Interim Agreement we would expect the development of Soviet forces for intercontinental attack to proceed within the bounds suggested by Forces 3 and 4. As between 3 and 4, we think the Soviets would be likely to pursue the more ambitious goals depicted in Force 3. However, there are a variety of reasons—economic, technological, institutional and diplomatic—that might cause the Soviet force to evolve more along the lines of Force 4. Thus, Forces 3 and 4 define a band in which we think Soviet intercontinental attack forces would be likely to develop if the Interim Agreement were extended.

IMPLICATIONS OF THE FUTURE FORCES

88. The illustrative future Soviet forces in this Estimate all depict impressive modernization programs. The pace at which new strategic offensive technology is developed and deployed, and the kinds of force mixes selected in these illustrative forces, however, produce substantially differing results. The strategic and political significance of these alternative Soviet postures would certainly also be different. In the final analysis, their impact would depend a great deal on how they were perceived by other countries.

89. Against currently programmed US strategic offensive forces, none of the illustrative Soviet force projections would provide the USSR a capability to reduce damage to itself to acceptable levels by a first strike against US strategic forces. The Soviets would have to calculate that the US could respond to an all-out surprise attack with devastating effect on Soviet urban-industrial and military targets. Similarly, any of the illustrative forces ascribed to the USSR could retaliate effectively against a first strike by US programmed forces. Thus, the basis of a mutually deterrent strategic balance is likely to remain essentially intact.

90. This balance notwithstanding, the alternative illustrative Soviet forces presented in this Estimate would clearly represent markedly different strategic environments. Illustrative Force 4 presents an arsenal in which the image of Soviet strategic power grows modestly and no overriding threat to the survival of US offensive force elements materializes. Viewed from a Soviet perspective, this force might be

regarded as meeting minimum standards of "strategic equality" and comparative force effectiveness against programmed US forces.

91. Forces 1, 2, and even 3, however, would appear far more formidable, in comparison, to the US and its allies. After the mid-1970s Forces 1 and 2 would surpass programmed US forces in all conventional static measures of strategic power and Force 3 would provide an edge in many of them. In some measures, Forces 1, 2, and 3 would be markedly superior. These forces would, as a result, provide the image of a margin of Soviet strategic superiority to those who ascribe high significance to these measures. If they could acquire those advantages without provoking US counter efforts, the Soviets would probably attempt to exploit them as a favorable backdrop to political and diplomatic endeavors.

92. Although Forces 1, 2 and 3 would not impart to the USSR a clear damage-limiting superiority against programmed US strategic forces, they could appear to other countries to give the Soviet Union war-initiation options and incentives, and, consequently, political staying power in crises exceeding that of the US. The USSR would appear in a better position to initiate limited attacks on US strategic forces without attacking cities, or to conduct a strategic conflict that each side seeks to terminate short of massive exchanges (although Soviet strategic doctrine apparently does not at present provide for limited strategic nuclear exchanges). However, the Soviets might still feel exposed to comparable threats of limited attacks by the US.

93. Considerable uncertainty is likely to persist with regard to the more critical qualitative features of the Soviet strategic posture. It will be difficult to measure with confidence the accuracy of Soviet MIRVed ICBMs, to which the prelaunch survivability of US silo-based missiles is most directly linked. Equally important, if Soviet ICBM accuracies are no better than [ ] they would require an ability to attack each target with more than one weapon to inflict severe damage on US ICBM forces. We shall probably remain uncertain about the feasibility of this tactic and of Soviet plans with respect to using it. In general, in the absence of a significant change in intelligence capabilities the strategic relationship over the next decade is likely to be much more sensitive to uncertainties about force qualities, operations, and employment plans than to the more readily measurable quantitative factors such as launchers and overall weapon numbers.

CENTRAL INTELLIGENCE AGENCY

DISSEMINATION NOTICE

1. This document was disseminated by the Central Intelligence Agency. This copy is for the information and use of the recipient and of persons under his jurisdiction on a need-to-know basis. Additional essential dissemination may be authorized by the following officials within their respective departments:

a. Director of Intelligence and Research, for the Department of State
b. Director, Defense Intelligence Agency, for the Office of the Secretary of Defense and the organization of the Joint Chiefs of Staff
c. Assistant Chief of Staff for Intelligence, Department of the Army, for the Department of the Army
d. Director of Naval Intelligence, for the Department of the Navy
e. Assistant Chief of Staff, Intelligence, USAF, for the Department of the Air Force
f. Assistant General Manager for National Security, for the Atomic Energy Commission
g. Assistant Director, FBI, for the Federal Bureau of Investigation
h. Director of NSA, for the National Security Agency
i. Special Assistant to the Secretary of the Treasury, for the Department of the Treasury
j. Deputy for National Intelligence Officers, CIA, for any other Department or Agency

2. This document may be retained, or destroyed by burning in accordance with applicable security regulations, or returned to the Central Intelligence Agency by arrangement with the Deputy for National Intelligence Officers, CIA.

3. When this document is disseminated overseas, the overseas recipients may retain it for a period not in excess of one year. At the end of this period, the document should either be destroyed, returned to the forwarding agency, or permission should be requested of the forwarding agency to retain it in accordance with IAC-D-69/2, 22 June 1953.

4. The title of this document when used separately from the text should be classified: ~~SECRET~~

~~Top Secret~~
~~*Controlled Dissem*~~
~~*Limited Distribution*~~